

REMARKS

Claims remaining in the present application are 1-33. The Applicants respectfully request reconsideration of the above captioned patent application in view of the remarks presented herein.

Reply Period

The Office Action summary indicates that a shortened statutory period for reply is set to expire 2 months... from the mailing date.

In a telephone call on December 20, 2005, Examiner Sun indicated that the indicated response period was incorrect, and that the actual reply period is three (3) months.

Applicants thank the Examiner for correcting this error.

Allowable Matter

The Official Action indicates that Claim 16 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants thank the Examiner for indicating allowable material.

35 U.S.C. § 102

Claims 1-3, 5-10, 12-14, 26-29 and 31-33 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Ando (US 20040111231, “Ando”).

Applicants have carefully reviewed the cited reference and respectfully assert that embodiments in accordance with the present invention as recited in Claims 1-3, 5-10, 12-14, 26-29 and 31-33 are patentable over Ando.

With respect to Claim 1, Applicants respectfully assert that Ando fails to teach or fairly suggest the limitation “measuring power consumed by an integrated circuit under test” as recited by Claim 1.

The rejection alleges this limitation is taught by Ando [0030]. Applicants respectfully assert that the cited paragraph does not relate to the measurement of “power.” Applicants respectfully assert that the entirety of Ando is silent as to any teaching of measuring power, as recited by Claim 1.

For this reason, Applicants respectfully assert that Claim 1 overcomes the rejections of record, and respectfully solicit allowance of this Claim.

For instance, embodiments in accordance with the present invention as recited in Claim 1 recite a system for utilizing power consumption and ambient temperature as inputs to control junction temperature. As recited by Claim 1, power consumption is a controlling input. In contrast, as taught by Ando, power consumption is a controlled output: “the power used by a circuit block can be controlled by controlling its supply voltage” [0022, emphasis added]. Applicants respectfully assert that one of ordinary skill in the art would understand a fundamental difference between the taught controlling power consumption and the recited controlling junction temperature. Consequently, Ando teaches away from embodiments of the present invention that recite power consumption as a controlling input as recited by Claim 1.

For this reason, Applicants respectfully assert that Claim 1 overcomes the rejections of record, and respectfully solicit allowance of this Claim.

In addition with respect to Claim 1, Applicants respectfully assert that Ando fails to teach or fairly suggest the limitation “measuring an ambient temperature associated with said integrated circuit under test” as recited by Claim 1.

Ando may teach, “monitor(ing) the ambient temperature of the chip.” However, this teaching is explicitly directed to a time that “the chip doesn’t operate” [0035]. Applicants respectfully assert that a non-operating chip does not consume power and is not participating in a burn-in test. Consequently, Ando fails to teach or fairly suggest the limitation of “measuring an ambient temperature associated with said integrated circuit under test” in combination with the limitations “integrated circuit under (burn-in) test,” “measuring power consumed by an integrated circuit under test,” and “measuring an ambient temperature associated with said integrated circuit under test” as recited by Claim 1.

For this additional reason, Applicants respectfully assert that Claim 1 overcomes the rejections of record, and respectfully solicit allowance of this Claim.

Further with respect to Claim 1, Applicants respectfully assert that Ando fails to teach or fairly suggest the limitation “adjusting a body bias voltage of said integrated circuit under test to achieve a desired junction temperature of said integrated circuit under test” as recited by Claim 1.

While Ando may teach controlling various parameters “in order to maintain a predetermined temperature range [0035],” there is no teaching in

Ando that such a maintained temperature is a junction temperature. In fact, the entirety of Ando does not contain the term “junction,” and therefore Ando must be silent as to achieving a desired junction temperature, as recited by Claim 1.

For this further reason, Applicants respectfully assert that Claim 1 overcomes the rejections of record, and respectfully solicit allowance of this Claim.

Claims 8 and 27 stand rejected with the same arguments presented with respect to Claim 1. Applicants respectfully assert that Claims 8 and 27 overcome the rejections for at least the rationale previously presented with respect to Claim 1.

Claims 2-7 depend from Claim 1. Claims 9-14 depend from Claim 8. Claims 28-33 depend from Claim 27. Applicants respectfully assert that Claims 2-7, 9-14 and 28-33 overcome the rejections of record as they depend from allowable claims, and respectfully solicit allowance of these Claims.

35 U.S.C. § 103

Claims 4, 11, 19-25 and 30 stand rejected under 35 USC § 103(a) as being allegedly unpatentable over Ando (US 20040111231, "Ando") in view of Chandrakasan et al. (US 20040183288, "Chandrakasan"). Applicants have reviewed the cited references and respectfully assert that embodiments in accordance with the present invention as recited in Claims 4, 11, 19-25 and 30 are patentable over Ando in view of Chandrakasan.

Claim 4 depends from Claim 1. Claim 11 depends from Claim 8. Claim 30 depends from Claim 27. Applicants respectfully assert that Claims 4, 11 and 30 overcome the rejections of record as they depend from allowable claims, and respectfully solicit allowance of these Claims.

With respect to Claim 19, Applicants respectfully assert that the proposed modification of Ando in view of Chandrakasan that underlies the rejection would change the principle of operation of Chandrakasan and therefore the cited combination does not suggest the claimed embodiment.

For instance, embodiments in accordance with the present invention as recited in Claim 19 recite a system for utilizing power consumption and ambient temperature as inputs to control junction temperature. As recited by Claim 19, power consumption is a controlling input. In contrast, as taught by Chandrakasan, power consumption is a controlled output. Applicants

respectfully assert that one of ordinary skill in the art would understand a fundamental difference between the taught controlling power consumption and the recited controlling junction temperature. Consequently, Chandrakasan teaches away from embodiments of the present invention that recite power consumption as a controlling input as recited by Claim 19.

For this reason, Applicants respectfully assert that Claim 19 overcomes the rejections of record, and respectfully solicit allowance of this Claim.

Further, the rejection characterizes Ando as teaching power consumption as a controlling input [2]. Based upon this characterization, Chandrakasan teaches away from Ando. Consequently, the two references proposed in combination teach away from one another. Thus the combination of Ando in view of Chandrakasan is improper.

For this additional reason, Applicants respectfully assert that Claim 19 overcomes the rejections of record, and respectfully solicit allowance of this Claim.

Claims 20-26 depend from Claim 19. Applicants respectfully assert that these Claims overcome the rejections of record as they depend from an allowable claim, and respectfully solicit allowance of these Claims.

Claims 15 and 18 stand rejected under 35 USC § 103(a) as being allegedly unpatentable over Ando (US 20040111231, “Ando”) in view of Cohen et al. (US Provisional Application 60/500,561, “Cohen”). Applicants have reviewed the cited references and respectfully assert that embodiments in accordance with the present invention as recited in Claims 15 and 18 are patentable over Ando in view of Cohen.

With respect to Claim 15, Applicants respectfully assert that Ando does not teach or suggest the limitation “measuring an ambient temperature in a region proximate to said integrated circuit” as recited by Claim 15 and alleged by the rejection, for at least the rationale previously presented with respect to Claim 1. Cohen does not correct this deficiency of Ando, nor does the rejection allege that it does. Consequently, neither Ando nor Cohen, alone or in combination, renders obvious this limitation recited by Claim 15.

For this reason, Applicants respectfully assert that Claim 15 overcomes the rejections of record, and respectfully solicit allowance of this Claim.

In addition with respect to Claim 15, Applicants respectfully assert that Cohen actually teaches away from embodiments in accordance with the present invention as recited in Claim 15. Cohen teaches measuring junction

temperature and using junction temperature as in input to a control mechanism (Figure 1, *inter alia*). By this teaching, Cohen actually teaches away from the recited “computer implemented method of determining a junction temperature” that does not use a junction temperature measurement to determine a junction temperature.

For this additional reason, Applicants respectfully assert that Claim 15 overcomes the rejections of record, and respectfully solicit allowance of this Claim.

Claims 17 and 18 depend from independent Claim 15. Applicants respectfully assert that Claims 17 and 18 overcome the rejections of record as these Claims depend from an allowable base Claim, and respectfully solicit allowance of these Claims.

Claim 17 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ando (US 20040111231, “Ando”) in view of Cohen et al. (US Provisional Application 60/500,561, “Cohen”) and further in view of Chandrakasan et al. (US 20040183288, “Chandrakasan”). Applicants have carefully reviewed the cited references and respectfully assert that embodiments in accordance with the present invention as recited in Claim 17

are not unpatentable over Ando in view of Cohen and further in view of Chandrakasan.

As described previously with respect to Claim 15, Cohen actually teaches away from embodiments in accordance with the present invention as recited in Claim 17. For this additional reason, Applicants respectfully assert that Claim 17 overcomes the rejections of record, and respectfully solicit allowance of this Claim.

CONCLUSION

Claims remaining in the present application are 1-33. The Applicants respectfully request reconsideration of the above captioned patent application in view of the remarks presented herein.

Applicants have reviewed the following references that were cited but not relied upon and do not find these references to show or suggest the present claimed invention: US 2004/0083075 and US 2004/0108867.


The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Respectfully submitted,

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Date: 3/1/2006



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